

## CLAIMS

What is claimed is:

1. A method for dispensing liquid reagent onto a microscope slide bearing a biological specimen, comprising the steps of:
- 5           providing a microscope slide bearing a biologic specimen;  
              providing a liquid reagent cartridge comprising a liquid reagent reservoir  
              and a liquid reagent metering chamber;  
              inserting said liquid reagent cartridge into a reagent cartridge frame, said  
10           reagent cartridge frame having receptacles for more than one liquid reagent  
              cartridge;  
              positioning said reagent cartridge frame onto a platform;  
              moving said liquid reagent cartridge and said microscope slide relative to  
              each other so that said liquid reagent cartridge is positioned approximately above  
15           said microscope slide;  
              causing an actuator to act upon said liquid reagent cartridge so as to  
              dispense liquid reagent;  
              stopping the actuator from acting to dispense liquid reagent, and causing  
              reagent to re-fill said metering chamber by flowing from said liquid reagent  
20           reservoir; and  
              removing said liquid reagent cartridge frame with the liquid reagent  
              cartridge from said platform.
2. A liquid reagent dispensing assembly with a removable reagent tray for dispensing liquid reagents onto microscope slides comprising:
- 25           a slide platform capable of holding at least one microscope slide;  
              a reagent platform positioned approximately above said slide platform  
              and being capable of movement under computer control;

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liquid reagent contained in a liquid reagent cartridge, said cartridge comprising a liquid reagent reservoir and a liquid reagent metering chamber;  
a liquid reagent cartridge frame having a plurality of receptacles for holding liquid reagent cartridges, said frame being removable from said reagent platform;

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an electrically controlled actuator capable of acting upon said liquid reagent cartridge so as to cause liquid reagent to be dispensed onto said microscope slide.

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